

Data

Born May 16, 1962, female, Citizen of Denmark

Home address: 6236 Twain Ct., Beltsville, MD 20705, Phone: (301) 931-1489

Education

D. Phil

1993 University of Oxford, UK - Theoretical Physics

Cand Scient (Master of Science equivalent)

1988 University of Århus, Denmark - Physics and mathematics

Positions held

Present position

Senior Research Associate award from the US National Research Council to do research at NASA
Goddard Space Flight Center

1998 - 2001

Senior Scientist in Solar system physics at the Danish Space Research Institute

External lecturer at the Niels Bohr institute for Astronomy, Physics and Geophysics , University of
Copenhagen

1994-1998

Research Scientist, Solar-terrestrial Physics Division, Danish Meteorological Institute; Project
scientist for the Greenland magnetometer chains; November 1997 appointed Ørsted project Scientist

1993-1994

Fellowship at the Nordic Institute for Theoretical Physics (NORDITA), Copenhagen

1989-1993

SNF (Danish national science research council) research grant to do research in theoretical physics at
University of Oxford

1988-1989

Adjunkt (teacher) at Risskov Amtsgymnasium (Higschool equivalent), Århus

Work Experience

Management

In my position as senior scientist at the Danish Space Research Institute I was the project manager
(group leader) of the solar wind-magnetosphere part of the research activities. I have been the lead
scientist of numerous research projects funded by the Danish Science Research Council. Throughout

the Danish Ørsted satellite project I have participated in the management and coordination of the research and data center activities hereof. During my employment at the Danish Meteorological Institute I was the project scientist on the Greenland magnetometer chain.

Teaching

I am an experienced teacher both at high-school and university level, have supervised numerous student bachelor and master projects, and in addition have performed public outreach activities on all levels very successfully.

Technical

Specific technical experiences include many years of working experience with programming in IDL, C, and Fortran; excellent knowledge of the Unix operating system and c-shell programming; user level knowledge of Windows, and windows based programs such as Microsoft-office, graphics, and movie software; and working experience with data handling and services, including web-based interfaces and html-editing.

Publication List

1. Selected publications in international refereed Journals

- 1) Moretto, T., M. Hesse, A. Yahnin, A. Ieda, D. Murr, and J.F. Watermann, Magnetospheric signature of an ionospheric traveling convection vortex event, Accepted for publication in J. Geoph. Res., 2001.
- 2) Olsen, N., T. Moretto, and E. Friis-Christensen, New approaches to explore the Earth's magnetic field, Submitted for publication in Journal of Geodynamics, 2001.
- 3) Moretto, T., A.J. Ridley, M.J. Engebretson, and O. Rasmussen, High latitude ionospheric response to a sudden impulse event during northward IMF conditions, J. Geoph. Res., 105, 2521-2531, 2000.
- 4) T. Moretto and A. Yahnin, Mapping Travelling Convection Vortex Events With Respect to Energetic Particle Boundaries, Ann. Geophys., 16, 891-899, 1998
- 5) Ridley, A.J., T. Moretto, P. Ernström, and C. R. Clauer, Global analysis of three travelling vortex events during the November 1993 storm using the assimilative mapping of ionospheric electrodynamic technique, J. Geoph. Res., 103, 26349-26358, 1998
- 6) Moretto, T. and E. Friis-Christensen, Ground Observations of Dayside Small-Scale Dynamic Features, Advances in Space Research, Vol. 20, 863, 1997.
- 7) Moretto, T., E. Friis-Christensen, H. Lühr, and E. Zesta, Global Perspective of Ionospheric Travelling Convection Vortices: Case Studies of Two GEM Events, J. Geoph. Res., 102, 11597, 1997
- 8) Yahnin, A. and T. Moretto, Travelling convection vortices in the ionosphere map to the central plasma sheet, Ann. Geophys., 14, 1025, 1996.
- 9) Moretto, T., Enhancement of Heavy Quarkonium Production in Hadron Collisions at Finite Temperatures Zeitschrift für Physik, C60, 541-560, 1993
- 10) Moretto Jørgensen, T., A.S. Jensen, A. Miranda, G.C. Oades, The Strong-interaction Fine and

2. Other Publications

- 11) Moretto, T., E. Friis-Christensen, J. W. Gjerløv, N. Olsen, F. Primdahl, The near-earth magnetic satellite missions, Ørsted and sac-c/Ørsted-2, in relation to the cluster II mission, in proceedings of the Cluster II workshop, Multiscale/Multipoint Plasma Measurements, ESA Publications Division, SP-449, 2000.
- 12) Friis-Christensen, E. and T. Moretto; "Danish space weather initiatives". Proceedings of the workshop on space weather. ESA Publication Division, WPP-155, 1999.
- 13) Moretto, T., Structure and Properties of Hadrons at Zero and Finite Temperature, D.Phil. Thesis, 1993, Oxford University

3. Selected presentations at international conferences and meetings

- 14) Moretto, T., M. Hesse, and A. Yahnin, Magnetospheric source region and current generation for traveling convection vortices, INVITED, AGU 2000 Spring Meeting, Boston, USA, May 2001
- 15) Moretto, T, Monitoring the auroral electrojets: problems and recent progress, INVITED, Space Weather Week, Boulder, April 2001
- 16) Moretto, T, and N. Olsen, Solar wind dependency of the auroral electrojet as observed by the Ørsted satellite, First S-RAMP Conference, Sapporo, Japan, October 2000
- 17) Moretto, T. Participating in Dayside transients team meeting at International Space Science Institute, Bern Switzerland, July 2000
- 18) Moretto, T. and Nils Olsen, A Proxy for the Auroral Electrojet From High Precision Geomagnetic Satellite Data, Chapman Conference on Space Weather: Progress and Challenges in Research and Applications, Clearwater, Florida, March 2000
- 19) Moretto, T. and M. Hesse, The dynamics of magnetosphere - ionosphere coupling, INVITED, IGPP Conference on Transport in the Magnetosphere, Yellowstone, USA, September 1999
- 20) Moretto, T. and N. Olsen, Determination of high-latitude field-aligned currents from magnetic satellite measurements - a comparison of different techniques, Chapman Conference on Magnetospheric Current Systems, Kona, Hawaii, January 1999
- 21) Moretto, T. and E. Friis-Christensen, Ground Observations of Dayside Small-Scale Dynamic Features, INVITED, COSPAR Symposium in Birmingham, July 1996.